DOCUMENT RESUME

ED 340 018 CS 213 086

AUTHOR Griffin, Jack C.
TITLE The Effect of Computers on Secondary Remedial Writing.
PUB DATE Aug 91
NOTE 68p.; M.S. Practicum, Nova University.
PUB TYPE Dissertations/Theses - Practicum Papers (043)

EDRS PRICE MF01/PC03 Plus Postage.
DESCRIPTORS *Computer Assisted Instruction; *Computers; Computer Software; English Instruction; High Schools; High School Students; *Remedial Instruction; *Writing Attitudes; *Writing Improvement; *Writing Instruction; Writing Research

ABSTRACT

A practicum implemented a program of writing instruction using computers, and measured its effectiveness in helping eleventh-grade remedial students meet the district's ninth-grade writing proficiency requirements, and in improving students' attitudes toward writing. Subjects were 13 eleventh-grade students in a C-track (remedial) English class. A pre-implementation survey determined experience and attitudes toward writing and computers. Writing assignments from the ninth grade writing proficiency exam were used as a pretest (handwritten) and posttest (handwritten and computer written). In 34 sessions over a 12-week period, students were instructed (using computers with word processing and software) on sentence structure and paragraphing. A posttest questionnaire elicited students' attitudes about writing and the use of computers. Results indicated that students improved in writing in both style and mechanics, with all students passing the proficiency paragraph exam. Improvements were noted both in the computer-generated and the handwritten assignment. Results also indicated that students' attitudes toward writing and homework improved as a result of the computer writing experience. (Twenty-three references are included; two appendixes contain the student questionnaire and the student computer ability survey.) (SR)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED340018

THE EFFECT OF COMPUTERS ON SECONDARY REMEDIAL WRITING

by

Jack C. Griffin

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Jack C. Griffin

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

This document has been reproduced as received from the person or organization originating it.

Minor changes have been made to improve reproduction quality.

Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

CS213086

A Practicum Report
submitted to the Faculty of the Center for
the Advancement of Education of Nova University in
partial fulfillment of the requirements for the
degree of Master of Science.

August 1991

BEST COPY AVAILABLE

ABSTRACT

The Effect of Computers on Secondary Remedial Writing
Griffin, Jack C., 1991: Practicum Report, Nova University,
The Center for the Advancement of Education.
Descriptors: Secondary Education/ Remedial Writing/ Computer Education/Word Processing/Paragraphing revisions/Editing/

The continuing low writing proficiency of remedial students was addressed by an implementation of computer programs designed to improve attitudes toward writing among the target students. A pre-implementation survey was conducted to determine experience and attitudes toward writing and computers. A pretest handwritten and computer written writing assignment was used as a base comparison. The results of computer writing experience indicated that the target students improved in writing in both style and mechanics. The improvement was noted both in the computer generated written assignment and the handwritten assignment. Important to note is the fact that the students' attitudes toward writing and homework changed as a result of the computer writing experience.

AUTHORSHIP STATEMENT

I hereby testify that this paper and the work it reports are entirely my own. Where it has been necessary to draw from the work of others, published or unpublished, I have acknowledged such work in accordance with accepted scholarly and editorial practice. I give this testimony freely, out of respect for the scholarship of other workers in the field and in the hope that my work, presented here, will earn similar respect.

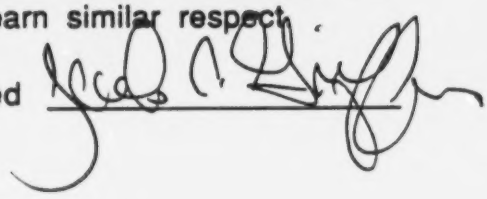
Signed 

TABLE OF CONTENTS

	Page
Title Page	i
Abstract	ii
Authorship Statement	iii
Observer's Verification	iv
Table of Contents	v
Chapters	
I. Purpose	1
II. Research and Solution Strategy	14
III. Method	21
IV. Results	41
V. Recommendations	54
Reference List	56
Attachments	
Attachment A: (Student Pre-Post Questionnaire)	60
Attachment B: (Student Computer Ability Survey)	63

CHAPTER I

PURPOSE

BACKGROUND

This practicum takes place in a high school that is situated in a middle class neighborhood in which the vast number of houses were built in the 60's. The average cost of housing that surrounds the high school is in the $60,000 to $80,000 range. The neighborhood is comprised of many different minorities which are in the low to upper-middle class of the socio-economic strata. However, 346 of the school's 1539 students are transported daily from a neighboring community located approximately 45 miles northeast of the high school. The average cost of housing in this community is $150,000; therefore, these students represent some of the upper-middle class portion of the student population.

This school district has been in existence since 1896, and the district now includes fifteen elementary schools, four middle schools, and four high schools. The school involved in the study was opened in the Fall of 1961, and it enjoyed years of great population growth from 1970 through 1982 when

enrollment ranged between 3100 to 2200 students. However, a decline in enrollment started in 1983 and this pattern has not reversed itself as of this date.

The population of the school was approximately 1799 students as of October 1, 1990. As of March 13, 1991, 260 students (125 males and 135 females) had withdrawn from the school's population. However, only 51 of these students dropped out of school with no intentions of re-entering a school setting. The drop-outs included 17 freshmen, 17 sophomores, 8 juniors and 9 seniors. The total student population was 1539 at the time that this study was considered. There are 435 freshmen, 376 sophomores, 400 juniors, and 328 seniors. There are 798 males and 741 females comprising the total student population. The age distribution of the student population is as follows: 14 year-olds, 136; 15 year-olds, 381; 16 year-olds, 399; 17 year-olds, 370; 18 year-olds, 195; 19 year-olds, 39; 20 year-olds, 10; and 21 year-olds, 9.

The student population is 87 percent (1339) white, non-Hispanic. The Hispanic population is 7.8 percent (120), and the Black is one percent (15). The American Indian population is 2.1 percent (32),

and the Pacific Islander or Asian is 2.1 percent (32). The English as a Second Language (ESL) program accommodates 39 students who speak the following languages: Spanish (25), Korean (2), German (1), Russian (1), Romanian (2), Japanese (1), Mandarin Chinese (2), Vietnamese (1), Cambodian (2), and Arabic (2).

The 100 teachers on staff at the high school are represented by 51 males and 49 females. The ethnic background of the teachers is 96 white, three Hispanic, and one Oriental. The age distribution of the teachers is as follows: under 30 years of age, three; 30 to 35 years of age, 13; 31 to 41 years of age, 13; 42 to 47 years of age, 24; 48 to 55 years of age, one. The student to teacher ratio is 22 to one.

The teachers at the high school have the following years of service in the district: one year of less, one; two to three years, six; four to five years, nine; six to 10 years, 18; 11 to 20 years, 32; 21 to 30 years, 27; and over 30 years, seven. The level of education of the teachers is as follows: Bachelors, five; Bachelors plus 15, four; Bachelors plus 30, 12; Bachelors plus 45, 17; Masters, three; Masters plus 15, six; Masters plus 30, seven;

Masters plus 45, 15; Masters plus 72, 29; and Doctorate, two.

The researcher is a graduate of the local university and has B.A. in Ed. with a major in English. The researcher is presently completing the sixth year of teaching in the English department at this high school and has taught primarily B-track freshmen and sophomore English. In this curriculum, the major emphasis is on composition skills. However, the last two years, two sections of C-track junior English were added to the teaching responsibilities of the researcher. It was the discovery of the C-track English students exemption from the writing proficiency exam that led to the realization of this practicum project. The role of the researcher is to initiate, design, and implement a program that will incorporate computers and software that will help the C-track student to be channeled into the mainstream of the student body in being able to demonstrate the ability to pass the writing proficiency exam.

The study took place in the researcher's fourth hour junior C-track English class in which there were 13 students. The researcher conducted a study in

which the use of computers and WRITE ON Sentences and WRITE ON Paragraph Seven software was incorporated into the instructional process to measure its effectiveness in aiding the C-Track student in his or her attempt to take and pass the district's ninth grade writing proficiency exam.

PROBLEM STATEMENT

The C-track student is placed in classes where remedial work is emphasized. However, these students have usually been in C-track classes before and have been remediated to a point of ineffectiveness. The differences in C-track English instruction between ninth and twelfth grade is minimal based upon an observation and inspection by this researcher into the total C-track English curriculum. C-track students have voiced frustration to this researcher about the curriculum as being monotonous, repetitious, tedious, and ineffectual. The students have almost unanimously agreed that individual writing skills have not improved to a point with which the students feel confident. It has been acknowledged to this researcher in class discussions

that the students avoid situations where a judgement is made solely on writing skills. C-track students have voiced a need and require help in writing letters, resumes, and completing application for employment. In class discussions, it has been stated that completing applications in the presence of their future employer is avoided. Instead, the application is taken home where help can be received from a source that can aid in writing complete sentences and check for misspellings.

The C-track student has many of the same problems with writing and composition skills in the twelfth grade that were evident in the ninth grade. The students will have difficult with spelling. This researcher evaluated a random sampling of various C-track student papers and found the following types of misspellings: rases vs. races; becase vs. because; spook vs. spoke; thier vs. their; resons vs. reasons; fare vs. fair; and consatution vs. constitution. The students have problems with diction (word choice) and usage as evidenced by the following examples culled from student papers: there vs. their; to vs. too; alot vs. a lot; could of vs. could have; don't vs. do not; and incorrect

verb usage. In further examining the student papers, this researcher found that the students have difficulty in writing compound sentences. The preference is to write simple sentences; however, run-on and fragmented sentences are still written. An evaluation of in-class writing assignments indicates that there also is a difficulty generating ideas, organizing the material, and editing. This is evidenced by examining in-class writing assignments done in the social studies classes and by observation from or by the social studies teacher.

All students at this high school must demonstrate the ability to read at or above the ninth grade level in order to graduate from high school. This requirement applies to the C-track students as well. In conjunction with this reading requirement, ninth grade, tenth grade, and eleventh grade students must demonstrate the ability to pass the district proficiency writing examination. Ninth grade students must demonstrate the ability to write 1 paragraph. Tenth grade students must demonstrate the ability to write a 3 to 5 paragraph essay, and eleventh grade students must show the ability to write a 5 to 7 paragraph essay. However, all C-

track students are exempt from all of the district's proficiency writing examination. The C-track student must only satisfy the district reading requirement. This decision is school based, and it is determined that the writing skills that are practiced in the remedial reading classes as well as the English class should be based on survival skills as opposed to the ability to write a formally constructed composition. The researcher takes exception to this policy.

The researcher knows that reading and writing are the foundation of any student's education. Since all students, as a district requirement, must demonstrate the ability to read at the ninth grade level in order to qualify for graduation, it is just as important that all students demonstrate the ability to write at the ninth grade level. This is a demonstration of proficiency in minimum reading and writing ability.

The students selected for this study were C-tract students placed in the researcher's 2 C-track English classes. There are four criteria for placement into C-track English. First, C-track students are placed based on performing at the first through third stanines on the Nelson or Iowa Test of

Basic Skills. Secondly, students are placed in C-track if an IQ ability rating of 1 through 3 is received. Third, students are placed in C-track if they receive grades of D or lower in reading, language arts, and humanities. Finally, teacher recommendation and English department approval result in a student being placed in C-track English.

The researcher's C-track English classes met first and fourth hour of the school day. First hour consisted of 12 students: one 15 year old male, six 16 year old males, two 17 year old males, and three 16 year old females. Fourth hour consisted of 13 students four 16 year old males, three 17 year old males, one 16 year old females and five 17 year old females.

The fourth hour class was selected as the target class because it met at the only time of the day when the computer lab was available. The computer lab contains 28 Macintosh SE-20's, one Macintosh SE-30, one Macintosh II CX, and one Apple LaserWriter II NT. The lab also has an overhead projector that can display computer software. Each student had access to a Macintosh SE-20.

The students in both groups had writing deficiencies and did not enjoy writing. When these students did write, the paragraphs were very limited, usually four to five sentences. Examples were not used in the writing and there was a lack of structure, organization, and unity. The students wrote primarily simple sentences, and the word choices were simplistic. The paragraphs contained mistakes in spelling, capitalization, and comma usage. Also, frequently there was found fragments and run-on sentences.

OUTCOME OBJECTIVES

The C-track students should be capable of passing a minimum ninth grade writing proficiency examination as a requirement for graduation from high school. With the exception of C-track students, all other students at the high school must meet this requirement. Since all students, as well as C-track students, must demonstrate the ability to read at the ninth grade level in order to qualify for graduation, it seems irresponsible to excuse and exempt the C-

track students from demonstrating this necessary capability and skill. This researcher knew that computers and the available software on word processing, sentence structure, and paragraphing were the key tools to assist the student in accomplishing this task.

After four months of instruction on computers with word processing and software on sentence structure and paragraphing, 50 percent of the eleventh grade C-track students in the fourth hour target group were expected to be able to pass the district's ninth-grade proficiency writing exam as graded by two English faculty members other than the researcher. The students were to be graded on the five criteria that encompasses the ninth grade district writing proficiency examination: content, organization, diction, style, and mechanics. An evaluation of high, medium, or low was to be determined for each student's composition with regard to the criteria. A "low" rating on any three of the five criteria was to result in the paragraph being unacceptable and receiving a non-pass classification. The researcher expected to find a significant difference in the number of students who pass this

posttest in relation to the number of students who pass the pretest paragraph. An increase in organization skills would indicate a use of critical thinking skills by the student.

After four months of instruction on computers with word processing and software on sentence structure and paragraphing, 50 percent of the eleventh grade C-track students were expected to find the writing process to be more enjoyable with a computer than when done with pen and paper. This was to be measured by comparing the responses on the pre and posttest student-evaluation questionnaire. The questionnaire has been modified from one used by Goran Moeberg (1987) in his study on Remedial Writing on Computers.

After four months of instruction on computers with word processing and software on sentence structure and paragraphing, 50 percent of the eleventh grade C-track students were expected to write more words on the posttest paragraph than the students wrote on the pretest paragraph. This was to

be measured by counting every word in the pretest and posttest paragraphs. The researcher expected to find this outcome as a result of the students enjoying the experience of writing with a computer and because of the ease of revising and correcting that the computer affords the user.

CHAPTER II

RESEARCH AND SOLUTION STRATEGY

Writing is viewed as a major skill to be acquired and refined in the secondary school curriculum. The use of the computer in the writing process is a relatively new phenomena in secondary schools. Available literature is contradictory regarding method, software, and evaluation of the computer and word processing in the scheme of teaching writing and composition. The available literature also concerns itself primarily with the process of revision in the writing process. Womble (1984) taught word processing in a tenth grade English class. Results indicated that students enjoyed revising more with the computer, and some students increased both the quantity and quality of the writing. Students were better able to evaluate the writing on a screen as opposed to paper. Wepner (1987) states that word processing encourages and motivates students to create and experiment with communication and writing without having to worry about the mechanics of writing. The word processing can also be used to help students generate ideas as

well as offer ". . . feedback about students' word choice, grammar, spelling, sentence complexity, and/or paragraph cohesion. . ." (Wepner, 1989:295). Shaw (1987) states that computers allow students to create, organize, experiment, and revise without having to rewrite the whole paper. This makes writing and revision easier. Herrmann (1987) states that computers are most generally found in business classes. Instead, this technology should be in English classes where students can be provided with ample time to learn to create, compose, revise, edit, and publish the work instead of just copying forms, reports and documents. Surratt (1989) points out that the computer will allow students to be more proficient writers. Wepner (1990) states that computers allow teachers to use software that helps students see relationships and connections between writing-reading and reading-writing.

Kurth (1987) studied whether word processing would improve the amount and quality of student revision. The results indicated that students who used computers and word processing wrote significantly more words in compositions. The students who used the computers felt more positive

about the ability to write. However, there was no significant difference between the groups on the amount of revision done. Self and Wahlstrom (1989) state that classes that benefit most from computers are those that involve and require a good amount of writing. Nash and Lawrence as reported by Etchison (1989) found that basic writers who use word processing increase dramatically the amount of text written, the coherence or connectedness of sentences, and the amount of evidence used to support points in a paper. Etchison (1989) also found that students produce significantly more words on the processor than by hand.

Broad (1983) found that a word processor was most valuable in the revision process. The word processor made it easier to ". . . delete, add, or move punctuation, words, sentences, paragraphs, or pages anywhere in the text (Broad, 1983:25). As a result of these features, the writer maybe encouraged to revise more often and more "adventurously." Wright (1986) states that the word processor is invaluable as a writing tool because of its ability to rearrange words and phrases, revise, add, delete and/or insert any place in the text that is desired

or needed. The word processor is also viewed as being unequalled in teaching sentence combining. Schwartz (1989) states that word processing encourages students to take risks with the writing. It help the students formulate ideas and to edit and review the works or peers. It helps students organize ideas and to see the structure of the essays before or after the fact. Shuman (1985) states that the most important feature of the computer is the word processing function because it allows students to rewrite and revise easily. The computer helps the student in checking for spelling and typographical errors, and in formatting writing. Flinn and Madigan (1989) state that a computer connected to a large monitor is an excellent tool to teach writing because the whole class can suggest revisions and see immediately how those revisions affect style, tone, and meaning. Mittricker (1983) states that the word processor helps in brainstorming, editing, moving portions of text around the screen, and deleting while still retaining the information in its memory bank. The word processor makes revision fun and easy while eliminating poor handwriting skills. However, Marcus (1987) states that the spelling and style

checkers in the word processors will make it more difficult for teachers to convince students to learn to master basic skills. He believes that handwriting skills will deteriorate if students do not practice the skill. Peacock and Breese (1990:43) learned that their subjects found the computer ". . . extremely time consuming. . ." to learn and that handwriting was quicker. The students were more creative when using the computer, but did less planning when using the computer. The students preferred revising the drafts from a print-out rather than on the screen. Erickson (1990:54-55) states that a MacProof 2.0 will check ". . . students' writing for correct capitalization, punctuation, 'be' verbs, sexist and racist language, verbals, expansion (transitional words) and abridgment (topic sentences and concluding sentences)." East (1990) points out that computers can take the difficulty out of spelling, grammatical usage, and word choice in the writing process.

Dunham (1985-1986) found that learning disabled students performed almost as well an non-learning disabled students in composition courses with the aid of word processing software. The key was the use of the word processing software. Moeberg (1987) studied

the use of computers in remedial writing courses at a community college. Sixty-seven percent of the students felt that the computer helped improve their content and organization. Sixty-nine percent of the students' writing habits were changed as a result of the computer. Fifty-four percent of the students revised more with a computer than with pencil and paper. Eighty-five percent of the students could find nothing negative to say about writing with computers. Finally, seventy-five percent of the students' final essays passed which was 28 percent higher than the department's average. Rosenbaum (1984) states that traditional methods have failed to help remedial disadvantaged writers. Computers and word processing help these students because revision is easier. The student tries more revisions and stays with the process longer because of the relative ease of the task. Crealock (1985) found that special needs' students writing increased in quality and quantity if familiar with keyboarding and word processing.

SOLUTION STRATEGY

Based upon the literature, this researcher perceived that computers with word processing and sentence and paragraphing software could be the difference in helping students become successful writers. Womble (1984), Etchison (1989), and Kurth (1987) foun that students enjoyed revising and increased the quantity and quality of the writing. Students who spend more time on a task or skill should become more proficient at that skill. Rosenbaum (1984), Broad (1983), and Wright (1986) found that computers made revision easier. Shuman (1985) and Shaw (1987) found that students revised more often with a computer. Wepner (1987) and East (1990) found that students could write and not worry about mechanics with a computer. Again, if a task is deemed easy, a student should not have negative feelings about attempting that task and staying with the task until a satisfactory conclusion is reached. Moeberg (1987) found that students who used computers had improved self-esteem about writing. The students also had improved content and organization in the writing, and revised more. The use of the computer also helped more students pass the essay exams.

CHAPTER III

METHOD

The researcher utilized two software programs by Humanities Software throughout the implementation. WRITE ON Sentences and WRITE ON Paragraphs Seven served as the catalyst and text to aid the students in the attempts at mastering paragraphing skills. The experiment consisted of 34 sessions over a 12 week period. Each session was 53 minutes. All sessions, except the first which took place in the classroom, took place in the computer lab. Each student had access to a Macintosh SE 20 and a personal WRITE ON software. During all activity in the computer lab throughout the duration of this study, one adult lab technician was available to assist students. This was in addition to the researcher who is also computer literate. The researcher's computer was connected to an overhead projector so that any material could be presented to the whole class simultaneously. The researcher was also circulating around the class to answer and assist with any problems and questions that might arise.

WEEK ONE: **SESSION ONE** During the first session, the researcher pretested all students on the ability to write a paragraph. The researcher had each student write one paragraph with pen and paper. The directions required the students to write the paragraph as error free as possible. No instruction was given to students before writing the paragraph. The students selected a topic from the 1985 district ninth grade writing proficiency exam.

WEEK ONE: **SESSION TWO** During this session, the students completed a questionnaire that elicited ideas, attitudes, and opinions about writing and the use of computers. At the conclusion of this activity, the students were provided with a disk on the Mac Tour of word processing. This tour was taken at an individual pace.

WEEK ONE: **SESSION THREE** The entire session was devoted to the Mac Tour of word processing. Students were encouraged to review any portions of the tour that

individually were able to be completed during the previous session. This was done in hopes of alleviating any computer anxiety that might be felt by any members of the class. The researcher circulated through the classroom and assisted any students who needed or asked for help.

WEEK TWO: **SESSION ONE** A WRITE ON Sentence disk was given to each student. This disk was to be used exclusively in the teaching of sentence writing. The researcher had a disk displayed on the overhead projector so that each student could monitor and check to ensure that the correct procedures were being practiced. A discussion, demonstration, and practice session followed whereby the students could practice the skills of scrolling, deleting letters or words, deleting entire passages, inserting the cursor to add letters, words, or sentences, copying and pasting, editing, saving, and printing. The spell checker on the word processor was also demonstrated. Each student was

able to practice these skills during this session.

WEEK TWO: **SESSION TWO** Students practiced the techniques utilized in the previous session. This session was to reinforce the skills and techniques that were needed in order to write, create, edit, revise, and print the future written assignments.

WEEK THREE: **SESSION ONE** The students practiced writing "good news-bad news" sentences presented on the WRITE ON Sentence disk. Joining the sentences with "and", "but", and "because" were practiced. The students also were able to create individual "good news-bad news" sentences modeled after the ones on the disk. The researcher encouraged creativity, originality, and humor in student writing. Each participant was afforded an opportunity to recite the sentences which the student wrote on a voluntary basis. All work was printed, collected, and inspected by the researcher. No grades were assigned to this activity. The

object was to allow the students to have fun and be creative while writing.

WEEK THREE: SESSION TWO Students worked with the WRITE ONE Sentence disk and received practice in identifying fragments and complete sentences. All fragments were to be deleted that were located. The students also practiced making complete sentences out of the fragments that were located. Students also intentionally tried to write fragments and orally explain what was missing that would make the fragment incapable of being labeled a sentence. The fragments were then rewritten into complete sentences by the students. Again, the students were given the opportunity to orally share the sentences.

WEEK THREE: SESSION THREE Students used the WRITE ON Sentence disk and practiced building longer and more interesting sentences by adding adjectives and adverbs to the sentences. Students received practice using the adjectives and adverbs that were

presented in expanding the practice sentences on the disk. The researcher also presented ten sentences on the overhead projector for all students to copy. These sentences were to be revised using any adjectives and/or adverbs that the student felt improved the sentences. All students printed the revisions, and these were collected for inspection by the researcher. Students who wished to read aloud the revisions were permitted to do so.

WEEK FOUR: SESSION ONE This session dealt exclusively with writing sentences using the adjective, noun, verb, adverb pattern presented on the WRITE ON Sentence disk. Students attempted to write more interesting sentences by utilizing this sentence pattern. Each student received practice creating 10 sentences utilizing this sentence pattern. All work was printed, collected, and inspected by the researcher. No grades were assigned.

WEEK FOUR: **SESSION TWO** Students wrote sentences on three topics provided by the WRITE ON Sentence disk. This first topic was to write about the most important thing the student ever learned. The second topic was to write about the best gift the student ever received. The third topic was to write about the hardest problem the student ever solved. The student answered a series of questions about the topics and this information was then incorporated into the final draft. The students printed the final drafts, and these were collected and evaluated by the researcher for sentence variety, word usage, spelling, and punctuation. No grade was assigned to the work.

WEEK FIVE: **SESSION ONE** The researcher passed back the evaluated work from the previous session. Students were asked to examine the evaluations. Then the students returned to the WRITE ON Sentence disk and rewrote the material by addressing the individual problems within the text. The

researcher expected this material to be excellent for revision. Students were asked to once again work through the entire lesson and print the revisions. All work was collected and evaluated by comparing the original and final drafts. This was needed so that the researcher could modify any instruction if so needed at this point.

WEEK FIVE: **SESSION TWO** Students utilized the WRITE On Sentence disk and completed exercises aimed at eliminating unwanted material from sentences. The students were presented with overloaded, wordy sentences and demonstrated the ability to selectively eliminate unnecessary words in order to make the sentences more concise and clear. The researcher led a class discussion in which students could voluntarily read the revisions aloud. The researcher did not collect this material.

WEEK SIX: **SESSION ONE** From this point until the completion of the study, all students used the WRITE ON Paragraphs Seven disk.

The student was given practice in writing clusters about nine topics provided on the disk. The topics were: the beach, favorite entertainer, dreams, secrets, friends, flowers, munchies, the future, and money. Students were afforded the opportunity to write a minimum of five word clusters for the nine topics. Students who choose to do so could orally share the ideas about the topics in a class discussion.

WEEK SIX: **SESSIONS TWO AND THREE** During these sessions, the students wrote one topic sentence about each of the nine topics using the information contained in the clusters. Encouragement was given to make any revisions in the clusters that were deemed necessary. The final drafts were printed and collected by the researcher. These drafts were evaluated for sentence fragments, run-ons, and spelling. The students were given the opportunity to correct any errors and resubmit the final draft for a grade.

WEEK SEVEN: SESSION ONE This session provided the students with an opportunity to work with exercises in adding details to support the topic sentence as presented by the WRITE ON Paragraph Seven disk. The students were presented with several topic sentences and a number of possible support sentences. After determining which sentences best supported the topic sentences, the final draft was to be organized and printed. These drafts were collected and inspected to ensure that the students understood how to discriminate and eliminate material that was irrelevant to the topic sentence. No grades were assigned to this assignment.

WEEK SEVEN: SESSION TWO The Write On Paragraph Seven disk was used to allow students practice in narrowing topic sentences that were too broad. The researcher led a class discussion illustrating a variety of topic sentences that were too broad. Students participated in rephrasing these unacceptable sentences. After practicing

on the topic sentences provided on the disk, the students selected one topic sentence and wrote a three to five sentence paragraph about that topic. The researcher allowed students to read the attempts orally. No one was forced to do this. Those who chose not to participate were asked to print the work for inspection by the researcher.

The researcher periodically used a class period when the students were not in the computer lab to discuss any problems or difficulties that the students were having. Also, this time was used to inform the students of the criteria that would be used for evaluation when taking the proficiency exam: content, organization, diction, style, and mechanics. The researcher had each student take handwritten notes on the criteria so that each student understood what is acceptable and unacceptable in regards to the paragraphs.

WEEK SEVEN: **SESSION THREE** This session focused on having the students write sentences about topics presented on the WRITE ON Paragraph Seven disk. The students wrote sentences about what might be seen, heard, touched, tasted, and smelled in regards to the various topics. After completing this activity, the students selected a topic and used the sentences to write a three to five sentence paragraph. The researcher believed that this activity would foster imaginative and critical thinking about common topics that students often overlook or fail to consider. The students were encouraged to share the paragraphs with each other, but this was not required. The researcher collected the paragraphs for inspection. However, the paragraphs were not graded or returned.

WEEK EIGHT: **SESSION ONE** The WRITE ON Paragraph Seven disk was utilized to give the students practice in inserting the correct transition words within a time order paragraph. The students were also

presented with seven sentences that were to be arranged into the correct sequence and supplied with the appropriate transitional word or phrase as needed.

WEEK EIGHT: SESSION TWO The WRITE ON Paragraph Seven disk was used to give the students practice in writing one expository paragraph. The students were presented with all the information needed to write the paragraph. Reflection on previous lessons was needed to insure that the paragraph had a topic sentence that was specific and not too broad, supporting sentences that developed the topic sentence, adjectives and adverbs that made the sentences interesting, and a concluding sentence. The final draft was printed and it was collected and evaluated by all previous criteria. The draft was returned to the student with a grade of pass or fail.

WEEK EIGHT: SESSION THREE The researcher explained to the class how to write a process paragraph. This was done with the use of

the overhead projector. The topic sentence was reviewed and then an explanation of the sequence to utilize in inserting the following transitional words was explained: first, second, third, next, then, after that, finally, and in conclusion. The students were required to restate the topic sentence in the conclusion. This methodology was used because it is taught at the ninth grade level. The researcher had each student make a list of eight things that are done each morning before the student leaves for school. After completing the list, a process paragraph was written explaining the things done before leaving for school each morning. The final drafts were collected, evaluated as pass or fail, and returned to the students.

WEEK NINE: **SESSION ONE** The researcher presented on the overhead projector a list of ten topics. The students used the word processing software portion of the disk to complete this assignment. Each student

copied the ten topics. It was explained that each topic sentence must contain three bits of information about the topic. For example, in writing a topic sentence about responsibilities at home, a student might write the following: "The three responsibilities that I have at home are to clean my room, babysit my sister, and wash the dishes." Also, it was explained that the concluding sentence should be a restatement of the topic sentence. For example, the concluding sentence for the above illustration would be: "Om conclusion, the three responsibilities that I have at home are to clean my room, babysit my sister, and wash the dishes." After this explanation, the students wrote one topic sentence and one concluding sentence for each of the ten topics presented by the researcher. The work was printed, collected, and evaluated as pass or fail and returned to the students.

WEEK NINE: **SESSION TWO** The lesson began with a discussion of any problems encountered in

the previous lesson. Students then retrieved from the disks the work done during the previous lesson regarding topic and concluding sentences. It was explained that the three items mentioned in the topic sentence were to become the nucleus of three other sentences within the paragraph (support). After demonstrating this lesson on the overhead projector, each student then wrote one sentence for each of the three items mentioned in the ten topic sentences. The sentences were to be written in the order that were mentioned in the topic sentence. The students also wrote an example or illustration sentence after each support sentence. Upon completion of this activity, the work was printed, collected, evaluated as pass or fail and returned to the students.

WEEK NINE: SESSION THREE The lesson began with a discussion of problems found in the students' work. Students then retrieved from the disk the work done during the

previous lesson. The students had the entire class period to select, write, edit, revise, and print any two paragraphs from the ten that were available to them. The paragraphs were printed, collected, and evaluated as pass or fail and returned to the students.

WEEK TEN: **SESSION ONE** The students had the entire class period to write a process paragraph on how to prepare a favorite food dish. The paragraph had to contain at least eight sentences; one of the sentences must be an example or illustration sentence. The final draft was printed and collected by the researcher. It was evaluated as pass or fail and returned to the students.

WEEK TEN: **SESSION TWO** The students had the entire class period to write an expository paragraph. The topics came from those used during the past five years on the ninth grade proficiency writing exam. The paragraphs were collected and evaluated as pass or fail and returned to the students.

WEEK TEN: **SESSION THREE** The period began with a discussion of problems that the students were encountering in writing. The researcher utilized the overhead projector to demonstrate any deficiencies that were being found. The students were then provided with five topics on the overhead projector, and were to write topic and concluding sentences for each one. The rest of the class period was spent as students verbalized the sentences. This activity was designed to help the students generate ideas.

WEEK ELEVEN: **SESSIONS ONE, TWO AND THREE** The entire class periods was used to practice for the proficiency exam. Students had the entire period to write an expository paragraph. The topics came from those used the past five years on the ninth grade proficiency writing exam. All work was collected and evaluated as pass or fail and returned to the students. Each session began with a discussion of any questions that students had in regards to the evaluations.

WEEK TWELVE: SESSION ONE The students took the ninth grade district proficiency writing exam. The computers were utilized for the test. The students had one class period to complete the test. All work was collected at the conclusion of the period.

WEEK TWELVE: SESSION TWO The students met in the regular classroom instead of the computer lab. Another form of the ninth grade district writing proficiency exam was taken by the students. However, this time the exam was completed using only pencil and paper. All work was collected at the end of the hour.

WEEK TWELVE: SESSION THREE The students completed a personal evaluation questionnaire about the experience of writing with computers. The questionnaires were collected and evaluated for significance.

WEEK TWELVE: SESSION FOUR The students met privately with the researcher to review the results of the writing proficiency

exam. The computer paragraph and the pencil and paper paragraph were both available for student viewing.

CHAPTER VI

RESULTS

The students began the study by taking a pretest which consisted of writing one paragraph in class. Pencil and paper were used to write the paragraph. The entire class period was used to write the paragraph. The students selected a topic from the district's ninth grade writing proficiency exam. The pretest was graded by two English faculty members other than the researcher. The students received a mark of low, medium, or high on five evaluative criteria: content, organization, diction, style and mechanics. Three lows on any of the criteria resulted in failure. The students also completed a pretest questionnaire that elicited ideas, attitudes and opinions about writing and the use of computers.

At the conclusion of the study, the students took a posttest. The posttest was a topic selected from the district's ninth grade writing proficiency exam. The students wrote one paragraph using the computer. One entire class period was allowed to complete the paragraph, and these paragraphs were evaluated by two English faculty members other than

the researcher. The paragraphs received a mark of low, medium, or high on five evaluative criteria: content, organization, diction, style, and mechanics. Three lows on any criteria resulted in failure. The researcher expected 50 percent of the students to pass the writing examination.

The day after the students completed writing the posttest paragraphs on the computer, the researcher had the students write another paragraph using pencil and paper. The researcher expected that each paragraph would contain less words than the posttest computer paragraph. The researcher expected that this would occur because the students would not find writing with a pencil and paper as enjoyable or rewarding as writing with a computer. The researcher counted all the words contained on each posttest computer paragraph and compared the tally with the quantity of words written on the posttest pencil and paper paragraph.

The students also took a posttest questionnaire that elicited ideas, attitudes and opinions about writing and the use of computers. The researcher anticipated that 50 percent of the students would view writing with a computer as more enjoyable and

rewarding as compared to writing with pencil and paper.

The student pre-questionnaire was administered to give the researcher an indication of the amount and quality of computer instruction and abilities the students possessed. Sixty-two percent of the students indicated that they had "quite a bit" of experience with typing or keyboarding before taking the class. Thirty-one percent responded that they had "quite a bit" of experience with computers before taking this class. Sixty-two percent of the students felt "very comfortable" about using the computer to do composition and writing assignments. However, only two of the thirteen students (15 percent) were able to pass the pre-test computer paragraph writing proficiency examination. Based upon observations by this researcher during the pretest, 86 percent of the students had extreme difficulty in manipulating the computer as well as adhering to some formal method of paragraph construction.

A comparison of responses between the student pre and posttest questionnaire regarding abilities, attitudes and opinions about writing with computers showed some positive gains. In response to question

number one (How do you feel about using the computer in this class to learn composition skills and to do your writing assignments?) only 31 percent felt "very comfortable" during the pretest and 38 percent were "not comfortable" with the computers. However, during the posttest response to question number one, 100 percent of the students responded that they were "very comfortable" with using the computer to do the writing assignments.

In response to question number two (What is your attitude about writing and doing assignments that require writing paragraphs?) 15 percent "liked it" and 46 percent "disliked it" according to the pretest. However, the posttest showed that 31 percent "liked it" and only 15 percent "disliked it". This a favorable, significant attitude change towards writing and paragraph assignments.

In answer to question number three (How would you rate your abilities as a writer?) the pretest showed that 8 percent indicated that they were "good" writers, 69 percent indicated that they were "average" writers and 23 percent indicated that they were "poor" writers. However, the posttest showed that zero percent indicated that they were "good"

writers, 85 percent indicated that they were "average" writers, and only 15 percent indicated that they were "poor" writers. This signifies an improvement in student self-evaluation of writing skills.

In reply to question number four (How much editing do you do when you write paragraphs?) the pretest showed that 23 percent did "a lot". 54 percent did "some" and 23 percent did "none". However, the posttest showed that eight percent did "a lot", 84 percent did "some" and eight percent did "none". Through grouping of response categories this shows that during the pretest only 77 percent did "a lot" or "some", while during the posttest 92 percent did "a lot" or "some" editing.

In reaction to question number five (How much revision do you do when you write paragraphs?) pretest results exhibited that eight percent did "a lot", 62 percent did "some" and 31 percent did "none". The posttest, however, showed that 15 percent did "a lot" of revision, 77 percent did "some" and eight percent did "none". Again, through response category grouping, the pretest showed that 70 percent did " lot" or "some" revision compared to

92 percent of the posttest responses that indicated "a lot" or "some" revision.

Question number six (To what extent did writing on the computer help your editing skills?) found that the during the pretest eight percent responded "very much", 38 percent responded "a little bit" and 54 percent responded "none". The posttest results showed that 77 percent indicated "very much", 23 percent indicated "a little bit" and zero percent indicated "none". This was a drastic improvement if one groups response categories. While during the pretest, 92 percent responded to either "a little bit" or "none", the posttest showed that 100 percent did at least "a little bit" of editing and the editing skills were enhanced.

In response to question number seven (To what degree did you revise your writings on the computer compared to the revising you did by pencil and paper?) 15 percent did "a lot", 38 percent did "a little bit" and 46 percent did the "same" according to the pretest. However, according to the posttest, 69 percent did "a lot", 15 percent did "a little bit", eight percent did the "same" and eight percent

did "less. This would indicate that students revise more when writing with the use of a computer.

In reply to question number eight (How much did you use the computer to move blocks of text around?) during the pretest zero percent did it "quite often", 15 percent did it "once in a while" and 85 percent "never" did it. The posttest results, however, shoed that 38 percent did it "quite often" and 62 percent did it "once in a while". This is significant, while during the pretest 85 percent "never" moved blocks of text around, however, the posttest showed that 100 percent of the students moved blocks of text around at least "once in a while".

In response to question number nine (Is it easier for you to write with pencil and paper as a result of this class and your experience with the computer?) the pretest responses were zero percent "a lot easier", 23 percent "a little easier" and 77 percent the "same". However, the posttest results showed that 23 percent thought it was "a lot easier", 38 percent "a little easier", 23 percent the "same" and 16 percent "more difficult". This indicates that the computer experience is beneficial to the majority

of students in carry-over skills when writing with pencil and paper.

Question number 10 (Would you suggest or recommend that all students learn composition skills by using the computer?) found that only 69 percent stated "yes", 15 percent "no" and 15 percent "could care less" according to the pretest. However, the posttest shows that 85 percent would recommend the computer compared to only 15 percent stating "no". The researcher feels that this is very significant when 85 percent of the class recommends learning composition by using the computer.

Finally, question number eleven (Now that you know how to write with a computer, do you plan to use a computer whenever the opportunity is available?) indicated a successful reaction to the computer experience. According to the pretest 15 percent responded "definitely", 77 percent responded "maybe" and eight percent responded "no". However, according to the posttest 92 percent responded that they would "definitely" use a computer whenever it was available and eight percent indicated that "maybe" they would use a computer. Not one student indicated that they would not use a computer. Again, the researcher

feels that this is a significant and favorable reaction to the computer experience.

The pretest computer written paragraph resulted in thirteen students writing a total of 663 words for an average of 51 words per student. However, only two students out of 13 (15 percent) passed the examination. Also, the two students who did pass had two lows each on their paragraphs; one more low would have resulted in a failure on the assignment.

The researcher also administered the pretest for the students to complete in longhand. The students wrote a total of 792 words for an average of 60 words per student. The students averaged nine words more than they did on the computer written test. This indicated that they were more comfortable with pencil and paper than they were with a computer. A total of three students (23 percent) passed this examination. However, all three students had two lows on each of the assignments; one more low would have resulted in a failure on the test.

The results of the posttest computer written paragraphs were encouraging. The students wrote a total of 1522 words for a total of 117 words per student. Every student (100 percent) passed the

proficiency paragraph exam. Three students (23 percent) did not receive any lows on the papers. Also, five students (38 percent) only received one low on the papers.

Several students made dramatic improvements in the quantity of words they were able to produce on the computer from the pretest to the posttest. One student produced 55 words on the pretest an 109 words on the posttest. Another student produced 63 words on the pretest and 114 words on the posttest. Finally, another student wrote 55 words on the pretest and 117 words on the posttest. The fewest words written by any student on the pretest was 35 words, but the fewest words written by any student on the posttest was 71 words. The most words written by any student on the pretest was 65 words, but the most words written by any student on the posttest was 173 words.

The researcher also administered the posttest in longhand. The students wrote a total of 1307 words for an average of 100 words per student. However, eight students (62 percent) failed the exam. Only five students (38 percent) passed the examination.

The student responses to the computer experience was very favorable. One student stated, "The computer allows me to go back and write more words and sentences in my paragraphs. It makes my paragraphs longer and more interesting. It seems like I have something to say."

Another student states that writing was ". . . more interesting and easier because I can rearrange my sentences easier. I'd probably do more of my homework if I had a computer."

A third student stated, "I like computers because correcting mistakes is easier. I can type faster than I can write. I'm writing better types of sentences. My writing is getting faster, so I don't mind the homework so much."

Another student stated, "I like working with the computers. It provides real work experience. It has helped my writing in longhand, especially in organizing my paragraph. Since it is easier to write on a computer, I don't mind writing."

Another student like the computers because it made the ". . .work look neater, and I feel more creative when I'm using the computer." Still another student stated that ". . . it is easier to write with

a computer for content, but I have problems with commas that I don't have with longhand. Still, I like it because it is faster."

Another student stated, "I like the computer because I can revise and edit easier. I don't revise when I write longhand. It is easier to rearrange things on the computer. I don't mind doing homework on a computer but I hate to write longhand."

Another student stated, "I like the computer. I like to cut and paste and rearrange things. I write better and faster with a computer. I can not read my own handwriting."

The researcher observed that the computer experience was enjoyable, beneficial and educational to the students as a result of their voluntary comments during the implementation. It was obvious that the students approached the computer writing in a more positive attitude than when the assignment was in longhand.

The researcher has successfully attained the outcome objectives. One hundred percent of the students passed the ninth grade proficiency writing exam using the computer. Only 38 percent were able

to pass the ninth grade proficiency writing exam using longhand.

The student questionnaire showed that 92 percent would use a computer whenever one was available instead of writing by longhand. Eighty-five percent recommended that all students learn composition skills by using the computer. Sixty-one percent stated that the computer made their longhand writing " a little easier". Finally, 100 percent of the students felt "very comfortable" using the computer to do writing assignments.

The students wrote more words on the posttest paragraphs than they did on the pretest paragraphs. One hundred percent of the students wrote more words in the posttest longhand paragraph than they did in the posttest longhand paragraph. The students averaged 60 words per student in the pretest longhand paragraph and they averaged 100 words per student in the posttest longhand paragraph. The students also wrote more words on the posttest computer paragraph than they did on the pretest computer paragraph. The students averaged 51 words per student on the pretest computer paragraph and they averaged 117 words per student on the posttest computer paragraph.

CHAPTER VII

RECOMMENDATIONS

The researcher recommends that a nine week, quarter semester, computer composition and writing unit be part of all levels of C-track English at the school site. This would include grades nine through 12. It would also be hoped that this strategy would be implemented at the other high schools in the district. The researcher also recommends that C-track students not be eliminated from being required to pass the district's writing proficiency exam. The C-track student should be prepared and allowed to take the ninth grade, tenth grade and eleventh grade writing proficiency examinations, which is currently required of all regular track students at the high school.

It is also recommended that future study might be worthwhile in intensifying the positive carry-over from computer writing to longhand writing. It is also recommended that regular track students in the English curriculum be introduced to writing with computers. This would be extremely beneficial to

twelfth grade English students where the requirement is to write a research paper.

The researcher recommends that all teachers of C-track English be required to demonstrate computer literacy so that they can assist, guide and even help write individualized writing software for their students. It is hoped that teachers would no rely solely on a computer lab for the experiences for the students. It is hoped that at least one computer could be incorporated into all types of learning lessons within the classroom including lectures as well as reading assignments.

The researcher recommends that all teachers of English at the subject high school be required to take an in-service training program involving computers. This would include more than just how to use a computer. It should also include available software for the teachers of English. As quickly as software is evolving, teachers need to be aware and constantly on the watch for the latest materials and software that make English, reading and writing a more enjoyable and successful experience for all students.

REFERENCE LIST

Broad, Richard G. "Writing and Word Processing." The Leaflet, 1983, pp. 25-27.

Crealock, Carol M., et. al. "Creative Writing Competency: A Comparison of Paper and Pencil and Computer Technologies to Improve the Writing Skills of Mildly Handicapped Adolescents." 1985. Photocopy, n.d.

Dunham, Trudy. "Learning Disabled College Writers Project." 1985-1986. Photocopy, n.d.

East, Philip. "On the Basics of Education in the 21st Century." The Computing Teacher. March 1990, pp. 6-7.

Erickson, Barbara G. "Revision for the Restless: Peer Editing with the Macintosh." The Computing Teacher. August/September 1989. pp. 54-55.

Etchison, Craig. "Word Processing: A Helpful tool for Basic Writers." Computers and Composition. April 1989. pp. 32-39.

Finn, Jane Zeni, and Chris Madigan. "The Gateway Writing Project: Staff Development and Computers in St. Louis." Computers in English and the Language Arts. Ed. by Selfe, Cynthia L., Dawn Rodrigues, and William R. Oates. 1989. pp. 55-69.

Herrmann, Andrea W. "Teaching Writing with Computers: Are We Being Realistic?" October 29-31, 1987. Photocopy, n.d.

Kurth, Ruth J. "Word Processing and Composition Revision Strategies." 1987. Photocopy, n.d.

Marcus, Stephen. "Computers and English: Future Tense ... Future Perfect?" English Journal. September 1987. pp. 88-90.

Mittricker, Margaret L. "Word Processing and the Writing Process." The Leaflet. 1983. pp. 20-23.

Moeberg, Goran. "Remedial Writing on Computers: Evaluation by Students and FAculty of a Pilot Project, Fall 1985." Computers and Composition. August 1987. pp. 34-36.

Peacock, Michael, and Chris Breese. "Pupils with Portable Writing Machines." Educational Review. 1990. pp. 42-51.

Rosenbaum, Nina Joy. "Problems with Current Research in Writing Using the Microcomputer." 1984. Photocoyp, n.d.

Selfe, Cynthia L., and Billie J. Wahlstrom. "Computer-Supported Writing Classes: Lessons for Teachers." Computers in English and the Language Arts. Ed. by Selfe, Cynthia L., Dawn Rodriques, and William R. Oates. 1989. pp. 257-268.

Schwartz, Helen J. "Creating Writing Activities with the Word Processor." Computers in English and the Language Arts. Ed. by Selfe, Cynthia L., and Dawn Rodrigues, and William R. Oates. 1989. pp. 197-202.

Shaw, Tim. "Computer-Aided Composition: Looking Backward." The Macintosh Lab Monitor. Spring 1987. pp. 10-12.

Shuman, R. Baird. A Dozen Ways for English Teachers to use MicroComputers." English Journal. October 1985. pp. 37-39.

Surratt, Jim. "A Technological "Approach to Process Writing." Technological Horizons in Education Journal. 1989 Special Issue. pp. 28-31.

Wepner, Shelley B. "Reading, Writing and Word Processing." Reading Psychology. 1987. pp. 295-309.

Wepner, Shelly B. "Computers and Whole Language: A 'Novel' Frontier." The Computing Teacher. 1990. pp. 24-28.

Womble, Gail G. "Process and Processor: Is there Room for A Machine in the English Classroom?" English Journal. January 1984. pp. 34-37.

Wright, Anne. "Computers As Instructional Aids. 1986. Photocopy. n.d.

ATTACHMENT A

STUDENT PRE-POST QUESTIONNAIRE

STUDENT QUESTIONNAIRE

1. How do you feel about using the computer in this class to learn composition skills and to do your writing assignments?

   A. Very Comfortable B. A Little Comfortable

   C. Not Comfortable

2. What is your attitude about writing and doing assignments that require writing paragraphs?

   A. I Like it B. Take it or Leave it

   C. Dislike it

3. How would you rate your abilities as a writer?

   A. Good B. Average C. Poor

4. How much editing do you do when you write paragraphs?

   A. A Lot B. Some C. None

5. How much revision do you do when you write paragraphs?

   A. A Lot B. Some C. None

6. To what extent did writing on the computer help your editing skills?

   A. Very Much B. A Little Bit C. None

7. To what degree did you revise your writings on the computer compared to the revising you did by pencil and paper?

   A. A Lot B. A Little Bit C. Same
   D. Less

8. How much did you use the computer to move blocks of text around?

   A. Quite Often B. Once in a while
   C. Never

9. Is it easier for you to write with pencil and paper as a result of this class and your experiences with the computer?

   A. A lot easier B. A little easier
   C. Same D. More difficult

10. Would you suggest or recommend that all students learn composition skills by using the computer?

    A. Yes B. No C. Could care less

11. Now that you know how to write with a computer, do you plan to use a computer whenever the opportunity is available?

    A. Definitely B. Maybe C. No

ATTACHMENT B

STUDENT COMPUTER ABILITY SURVEY

COMPUTER ABILITY SURVEY

1. How much experience did you have with typing or keyboarding before you took this class?

   A. Quite a bit B. A little bit C. None

2. How much experience have you had with computers before taking this class?

   A. Quite a bit B. A little bit C. None

3. How do you feel about using the computer in this class to learn composition skills and to do your writing assignments?

   A. Very comfortable B. A little comfortable

   C. Not comfortable

4. What is your attitude about writing and doing assignments that require writing paragraphs?

   A. I like it B. Take it or leave it

   C. Dislike it

5. How would you rate your abilities as a writer?

   A. Good B. Average C. Poor

6. How much editing do you do when you write paragraphs?

   A. A lot B. Some C. None

7. How much revision do you do when you write paragraphs?

   A. A lot B. Some C. None